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EXAMINER

COUGHLAN, PETER D

ART UNIT	PAPER NUMBER
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2129

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,657

Applicant(s)

LOPEZ-ESTRADA, ALEX A.

Examiner

Peter Coughlan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-27, 29-31 and 34-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-17, 29-31 and 34-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/14/04 & 7/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1. This office action is in response to an AMENDMENT entered August 7, 2006 for the patent application 10/736657 filed on December 15, 2003.
2. The First Office Action of May 11, 2006 is fully incorporated into this Final Office Action by reference.

Status of Claims

3. Claims 11-27, 29-31, 34-37 are pending.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17, 24, 29 and 31 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention. These claims have the phrase 'generating a lookup index to a table of configuration'. The specification does not have the word 'table' in it. Therefore contents of these claims are not enabled.

35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-35 are rejected under 35 U.S.C. 101 for nonstatutory subject matter.

The computer system must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77. The invention is ineligible because it has not been limited to a substantial practical application. A platform adaptation method has no real world purpose or function. The applicant needs to provide a specific function or purpose that a platform adaptation provides. If there is none, then it is just an exercise.

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful,

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tangible and concrete.” If the claim is directed to a practical application of the § 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. § 101. Phrases like, ‘platform adaptation’, ‘platform’s execution of the workload’, ‘configure the platform’, ‘being executed by a platform sufficiently resembles’ are all abstract concepts and applicant has failed to provide a practical application for such devices.

The invention must be for a practical application and either:

- 1) specify transforming (physical thing) or
- 2) have the FINAL RESULT (not the steps) achieve or produce a
useful (specific, substantial, AND credible),
concrete (substantially repeatable/ non-unpredictable), AND
tangible (real world/ non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended, and if the specification discloses a practical application but the claim is broader than the disclosure such that it does not require the practical application, then the claim must be amended.

The applicant needs to provide how ‘platform adaptation’, ‘platform’s execution of the workload’, ‘configure the platform’ are beneficial in a real world application. If applicant fails to do so then these concepts are abstract concepts and are not statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-27, 29-31, 36, 37 are rejected under 35 U.S.C. 102(b) (hereinafter referred to as **Reinemann**) being anticipated by Reinemann , U.S. Patent Publication 20030115118.

Claim 17.

Reinemann anticipates generating a lookup index to a table of configuration parameters values (**Reinemann**, ¶0013; 'Lookup index to a table' of applicant is equivalent to 'policy' of Reinemann. Both 'table' and 'policy' of applicant and Examiner imply established information/parameters. 'Configuration parameters' of applicant is equivalent to 'parameters configured' of Reinemann.) based at least in part on one or more performance events observed in associated with a platform's execution of a workload (**Reinemann**, ¶0011; 'Index' of applicant is equivalent to 'archived' by Reinemann.); and selecting one of one or more pre-established sets of configuration parameter values, based at least in part on the generated lookup index (**Reinemann**, ¶0013), for application to configure the platform. (**Reinemann**, ¶0012; The policy manager uses the performance status for determination and the performance status is indexed (equivalent to archived of Reinemann)

Claim 18.

Reinemann anticipates evaluating an index function in view of the one or more performance events observed. (**Reinemann**, ¶0003 and Figure #1; The utilization of processors 11, 12 and 13 in Figure #1 are monitored for overloading or underutilization. The results of these are archived for the policy manager to evaluate.)

Claim 19.

Reinemann anticipates performing a selected one of receiving the one or more performance events observed; and monitoring said execution of the workload by the platform. (**Reinemann**, ¶0014; The policy manager monitors the resource utilization. 'Performance events' of applicant is equivalent to 'resource utilization' of Reinemann.)

Claim 20.

Reinemann anticipates performing a selected one of providing information about the selected set of one or more configuration parameter values to facilitate application of the selected set of one or more configuration parameter values to configure the platform (**Reinemann**, ¶0013; 'Providing information' of applicant is equivalent to 'target range' of parameters of Reinemann.); and applying the selected set of one or more configuration parameter values to configure the platform, the platform being a part of the system. (**Reinemann**, abstract; 'Applying' the set of applicant is equivalent 'releasing a portion' of Reinemann.)

Claim 21.

Reinemann anticipates storage medium having stored therein programming instructions designed to enable the apparatus (**Reinemann**, ¶0002; 'Storage medium' of applicant is equivalent to 'disk storage' of Reinemann.) to determine whether a workload executed or being executed by a platform sufficiently resembles a reference workload, based at least in part on one or more performance events observed from monitoring the platform's execution of the workload (**Reinemann**, ¶0014; 'performance events', 'monitoring' and 'workload' of applicant is equivalent to 'resource', 'monitors' and 'processors' of Reinemann.), and if the workload is determined to sufficiently resemble the reference workload, perform at least a selected one of selecting a set of one or more configuration parameter values pre-selected for the platform to execute the determined resembled reference workload (**Reinemann**, abstract; 'Applying' the set of applicant is equivalent 'releasing a portion' of Reinemann.), and providing information about the determined resembled reference workload to facilitate the selection of the set of one or more configuration parameter values pre-selected for the platform to execute the determined resembled reference workload (**Reinemann**, ¶0012; The 'accounting manager' of Reinemann provides information to the 'policy manager' which selects the policy (equivalent to 'set' of applicant)); and at least one processor coupled to the storage medium to execute the programming instructions. (**Reinemann**, ¶0002)

Claim 22.

Reinemann anticipates programming instructions are designed to enable the apparatus to perform said determine by determining a plurality of correlation metrics between the workload and the reference workload, based on the one or more performance events observed during said monitoring, observed during at least one prior execution of the reference workload (**Reinemann**, ¶0037; 'Correlation metric ' of applicant is equivalent to 'utilization' of Reinemann.); and determining whether at least one of determined correlation metrics exceeds a correlation threshold. (**Reinemann**, ¶0037; 'Correlation threshold' of applicant is equivalent to 'threshold' of Reinemann.)

Claim 23.

Reinemann anticipates receiving the one or more performance events observed during said monitoring (**Reinemann**, ¶0014; The policy manager monitors the resource utilization. 'Performance events' of applicant is equivalent to 'resource utilization' of Reinemann.); monitoring the execution of the workload to observe the one or more performance events; providing information about the selected set of one or more configuration parameter values to facilitate application of the selected set of one or more configuration parameter values to configure the platform (**Reinemann**, ¶0013; 'Providing information' of applicant is equivalent to 'target range' of parameters of Reinemann.); and applying the selected set of one or more configuration parameter values to configure the platform. (**Reinemann**, abstract; 'Set' and 'applying' of applicant is equivalent to 'policy' and 'releasing a portion' of Reinemann.)

Claim 24.

Reinemann anticipates storage medium having stored therein programming instructions (**Reinemann, ¶0002**; 'Storage medium' of applicant is equivalent to 'disk storage' of Reinemann.) designed to enable the apparatus to generate a lookup index to a table of configuration parameter values (**Reinemann, ¶0013**; 'Lookup index to a table' of applicant is equivalent to 'policy' of Reinemann. Both 'table' and 'policy' of applicant and Examiner imply established information/parameters. 'Configuration parameters' of applicant is equivalent to 'parameters configured' of Reinemann.), based at least in part on one or more performance events observed in associated with a platform's execution of a workload (**Reinemann, ¶0011**; 'Index' of applicant is equivalent to 'archived' by Reinemann.); and select one of one or more pre-established sets of configuration parameter values, based at least in part on the generated index, for application to configure the platform (**Reinemann, ¶0012**; The policy manager uses the performance status for determination and the performance status is indexed (equivalent to archived of Reinemann).); and at least a processor coupled to storage medium to execute the programming instructions. (**Reinemann, ¶0002**)

Claim 25.

Reinemann anticipates evaluating an index function in view of the one or more performance events observed. (**Reinemann, ¶0003 and Figure #1**; The utilization of processors 11, 12 and 13 in Figure #1 are monitored for overloading or underutilization. The results of these are archived for the policy manager to evaluate.)

Claim 26.

Reinemann anticipates receiving the one or more performance events observed; monitoring said execution of the workload by the platform (**Reinemann**, ¶0014; The policy manager monitors the resource utilization. 'Performance events' of applicant is equivalent to 'resource utilization' of Reinemann.); providing information about the selected set of one or more configuration parameter values to facilitate application of the selected set of one or more configuration parameter values to configure the platform (**Reinemann**, ¶0013; 'Providing information' of applicant is equivalent to 'target range' of parameters of Reinemann.); and applying the selected set of one or more configuration parameter values to configure the platform, the platform being a part of the system. (**Reinemann**, abstract; 'Set' and 'applying' of applicant is equivalent to 'policy' and 'releasing a portion' of Reinemann.)

Claim 27.

Reinemann anticipates a platform to execute a workload (**Reinemann**, abstract; 'Workload' and 'platform' of applicant is equivalent to 'processors (NOTE ≠ CPU)' and 'network of processors' of Reinemann.); a monitor, either coupled to or an integral part of the platform, to observe one or more performance events associated with the platform's execution of the workload (**Reinemann**, ¶0012; 'Monitor' of applicant is equivalent to 'interface' if Reinemann.); and an analyzer coupled to the monitor to receive the one or more performance events observed, and in response (**Reinemann**,

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¶0012; 'Analyzer' of applicant is equivalent to 'policy manager' of Reinemann.), at least contribute to selecting if possible, a set of one or more configuration parameters values for application to configure the platform, based at least in part on the one or more performance events observed (**Reinemann**, abstract; 'Set' and 'applying' of applicant is equivalent to 'policy' and 'releasing a portion' of Reinemann.), wherein the analyzer is adapted to at least contribute by determining whether the workload resembles one of one or more reference workloads (**Reinemann**, ¶0013; 'reference workload' of applicant is equivalent to 'usage pattern' of Reinemann.), based at least in part on the received one or more performance events observed, the resembled reference workload being employed to facilitate said selection of one of the one or more configuration parameter values. (**Reinemann**, ¶0013; 'Analyzer' of applicant is equivalent to 'policy manager' of Reinemann. 'Performance events' of applicant is demonstrated by 'resources operates above the upper threshold' of Reinemann. 'Configuration parameter' of applicant is equivalent to 'parameter configured' of Reinemann.)

Claim 29.

Reinemann anticipates the analyzer is adapted to at least contribute by generating a lookup index to a table of configuration parameter values (**Reinemann**, ¶0013; 'Lookup index to a table' of applicant is equivalent to 'policy' of Reinemann. Both 'table' and 'policy' of applicant and Examiner imply established information/parameters. 'Configuration parameters' of applicant is equivalent to 'parameters configured' of Reinemann.), to facilitate said selection of one of the one or

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more configuration parameter values, based at least in part on the received one or more performance events observed. (**Reinemann**, ¶0011; 'Index' of applicant is equivalent to 'archived' by Reinemann.)

Claim 30.

Reinemann anticipates a first networking interface; and the system further comprises a computing device hosting the analyzer, the computing device including a second networking interface to couple the computing device with the platform via a network connection. (**Reinemann**, ¶0012 and ¶0019; The analyzer of applicant is equivalent to 'policy manager' of Reinemann. 'First networking interface' and 'second networking interface' of applicant is equivalent to 'user A' and user B' of Reinemann. If both Users A & B can 'identify' resources then there must exists an interface.)

Claim 31.

Reinemann anticipates a machine readable medium instructions (**Reinemann**, ¶0002; 'Machine readable medium' of applicant is equivalent to 'disk storage' of Reinemann.); and a plurality of programming instructions on the machine readable medium, designed to enable an apparatus to observe one or more performance events associated with a platform's execution of a workload or receive the one or more performance events observed (**Reinemann**, ¶0012, abstract 'Performance events', 'platform' 'observed' of applicant are equivalent to 'utilization the resources', 'network or processors' 'obtains the performance status' of Reinemann.), and to at least contribute

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in selection of one or more configuration parameters values for application to configure the platform, based at least in part on the one or more performance events observed, (**Reinemann**, ¶0012 and ¶0013; The 'policy manager' selects which policy (equivalent to 'set' of applicant) to implement and each policy includes parameters.) wherein the at least contributing includes the platform determining whether the workload resembles one of one or more references workloads (**Reinemann**, ¶0013; 'reference workload' of applicant is equivalent to 'usage pattern' of Reinemann.), based at least in part on the received one or more performance events observed, the resembled reference workloads to be employed to facilitate said selection of one or ore configuration parameter values (**Reinemann**, abstract, ¶0013; 'Events observed' and 'performance events' of applicant is equivalent to 'monitor and 'resource utilization' of Reinemann. 'Configuration parameters' of applicant is equivalent to 'parameters configured' of Reinemann.); or generating a lookup index to a table (**Reinemann**, ¶0013; 'Lookup index to a table' of applicant is equivalent to 'policy' of Reinemann.) of configuration parameter (**Reinemann**, ¶0013; 'Configuration parameters' of applicant is equivalent to 'parameters configured' of Reinemann.) values based at least in part on the received observed one or more performance events, to facilitate said selection of one of the one or more configuration parameter values. (**Reinemann**, ¶0013 and ¶0014; 'Performance events' of applicant is demonstrated by 'resources operates above the upper threshold' of Reinemann. 'Selection'... 'configuration parameters' of applicant is performed by the 'centralized policy manager' which 'manages resource utilization' of Reinemann.)

Claim 36

Monitoring at least a selected one of a processor performance counter (Reinemann, ¶0011; 'Processor performance counter' of applicant is illustrated by the 'accounting manager' of Reinemann.), an OS performance counter (Reinemann, ¶0011), and a chipset performance counter (Reinemann, ¶0011), while the platform executes the workload.

Claim 37

One or more of processor configuration parameters values (Reinemann, ¶0028; 'Processor configuration parameters' of applicant is equivalent to 'memory usage' of Reinemann.), OS configuration parameter values (Reinemann, ¶0028; 'OS configuration parameter' of applicant is equivalent to 'processor utilization' of Reinemann.), and chipset configuration parameter values. (Reinemann, ¶0028; 'Chipset configuration parameter' of applicant is equivalent to 'virtual memory swap file usage' of Reinemann.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

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matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-16, 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Reinemann, as set forth above, and further in view of Chiu. (U. S. Patent Publication 20020186658, referred to as **Chiu**).

Claim 11.

Reinemann teaches determining. (**Reinemann**, ¶0012; 'Determining' of applicant is accomplished by the 'policy manager' of Reinemann.)

Reinemann fails to teach whether a workload executed or being executed by a platform resembles a reference workload.

Chiu teaches whether a workload executed or being executed by a platform resembles a reference workload. (**Chiu**, ¶0023; 'Reference workload' of applicant is equivalent to 'OSPF' of Chiu.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Reinemann by going into specific detail of an accepted that can be used with the method as taught by Chiu to have whether a workload executed or being executed by a platform resembles a reference workload.

For the purpose of integrating the method into the real world situation.

Reinemann teaches based at least in part on one or more performance events observed from monitoring the platform's execution of the workload (**Reinemann**,

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'Performance events' of applicant is equivalent to 'respective resources' of Reinemann.); and if the workload is determined to resemble the reference workload, performing a selected one of selecting a set of one or more configuration parameter values pre-selected for the platform to execute the resembled reference workload (**Reinemann**, ¶0013; 'Set' of applicant is equivalent to 'policy' of Reinemann.), and providing information about the determined resembled reference workload to facilitate the selection of the set of one or more configuration parameter values pre-selected for the platform to execute the determined resembled reference workload. (**Reinemann**, ¶0012; The 'accounting manager' of Reinemann provides information to the 'policy manager' which selects the policy (equivalent to 'set' of applicant)

Claim 12

Reinemann fails to particularly call for one or more reference workloads comprise at least a selected one of a route look-up workload, a OSPF workload, a JPEG codec workload, a 3DES encryption/decryption workload, an AES encryption/decryption workload, an IP packet forwarding workload, and a H.323 speech codec workload.

Chiu teaches one or more reference workloads comprise at least a selected one of a route look-up workload, a OSPF workload, a JPEG codec workload, a 3DES encryption/decryption workload, an AES encryption/decryption workload, 6 an IP packet forwarding workload, and a H.323 speech codec workload. (**Chiu**, ¶0023) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Reinemann by gonging into some

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specific detail on what a 'reference workload' is as taught by Chiu to have one or more reference workloads comprise at least a selected one of a route look-up workload, a OSPF workload, a JPEG codec workload, a 3DES encryption/decryption workload, an AES encryption/decryption workload, an IP packet forwarding workload, and a H.323 speech codec workload.

For the purpose of indicating that the invention is compatible with real world protocols that would enable it to interact with other real world systems.

Claim 13.

Reineman anticipates determining a correlation metric between the workload and the reference workload, based on the one or more performance events observed during said monitoring (**Reinemann**, ¶0037; 'Correlation metric' of applicant is equivalent to 'utilization' of Reinemann.), and observed during at least one prior execution of the reference workload; and determining whether the correlation metric exceeds a correlation threshold. (**Reinemann**, ¶0037; 'Correlation threshold' of applicant is equivalent to 'threshold' of Reinemann.)

Claim 14.

Reineman anticipates receiving the one or more performance events observed during said monitoring; and said monitoring. (**Reinemann**, ¶0014; The policy manager monitors the resource utilization. 'Performance events' of applicant is equivalent to 'resource utilization' of Reinemann.)

Claim 15.

Reineman anticipates the platform; and the method further comprises executing the workload (**Reinemann**, abstract ; 'Workload' and 'platform' of applicant is equivalent to 'processors (NOTE ≠ CPU)' and 'network of processors' of Reinemann.), and performing said monitoring. (**Reinemann**, abstract; 'Monitoring' of applicant is equivalent to 'monitor of Reinemann.)

Claim 16.

Reineman anticipates said performing comprises selecting a set of one or more configuration parameter values pre-selected for the platform to execute the determined resembled reference workload (**Reinemann**, ¶0012; The policy manager selects policies and pre-selects based on performance status.); and the method further comprises performing a selected one of applying the selected set of one or more configuration parameter values to configure the platform (**Reinemann**, abstract; 'Applying' the set of applicant is equivalent 'releasing a portion' of Reinemann.) , and providing information about the selected set of one or more configuration parameter values to facilitate application of the selected set of one or more configuration parameter values to configure the platform. (**Reinemann**, ¶0013; 'Providing information' of applicant is equivalent to 'target range' of parameters of Reinemann.)

Claim 34

Reinemann anticipates monitoring at least a selected one of a processor performance counter (**Reinemann**, ¶0011; 'Processor performance counter' of applicant is illustrated by the 'accounting manager' of Reinemann.), an OS performance counter (**Reinemann**, ¶0011), and a chipset performance counter (**Reinemann**, ¶0011), while the platform executes the workload.

Claim 35

Reinemann anticipates one or more of processor configuration parameters values (**Reinemann**, ¶0028; 'Processor configuration parameters' of applicant is equivalent to 'memory usage' of Reinemann.), OS configuration parameter values (**Reinemann**, ¶0028; 'OS configuration parameter' of applicant is equivalent to 'processor utilization' of Reinemann.), and chipset configuration parameter values. (**Reinemann**, ¶0028; 'Chipset configuration parameter' of applicant is equivalent to 'virtual memory swap file usage' of Reinemann.)

Response to Arguments

5. Applicant's arguments filed on August 7, 2006 for claims 11-27, 29-31, 34-37 have been fully considered but are not persuasive.

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6. In reference to the Applicant's argument:

Claim Rejections under 35 U.S.C. § 101

In "35 USC § 101," item 2 on page 2 of the above-identified Office Action, claims 1-33 have been rejected for claiming non-statutory subject matter. On page 3, the Examiner asserts that the phrases "platform adaptation", "platform's execution of the workload", "configure the platform", and "being executed by a platform sufficiently resembles" are all abstract concepts and have no practical application. Applicant respectfully disagrees.

The rejections of claims 1-10, 28, and 32-33 are obviated by their cancellations.

The phrases "platform adaptation" and "configure the platform" are well known to those of ordinary skill in the art of computing and commonly employed by them to convey the customization, adjustment, alteration and so forth of a module, component, or system. A quick search of Google shows over 8,380,000 hits for the phrase "platform adaptation". The top hits include an announcement by Microsoft Corporation of their TV Platform Adaptation Kit, and an article by Jeremy Johnson of Drexel University on "Platform Adaptation of Signal Processing Algorithm (See Attachment A)". Similarly, a quick search of Google shows over 45,000 hits for "config* platform". The top hits include "platform configuration" instructions by Parrot System, and "platform configuration" instructions by OOMMF (See Attachment B). Thus, the phrases clearly convey concrete operations and not just abstract ideas.

The phrase "platform's execution of the workload" is also well known to those of ordinary skill in the art of computing and commonly employed by them to convey the process of carrying out the instructions in a computer program or a computational task by a system. A quick search of Google shows over 1,340,000 hits for the phrase "platform workload execution". The top hits include an announcement by Sun Corporation of their Scalable Platform for Optimal Workload and Application Performance, and an article by Derek Uluski, et al. of Northeastern University on "Characterizing Antivirus Workload Execution" (on an Intel Pentium IV platform). Thus, the phrase clearly conveys concrete operations and not just abstract ideas.

The phrase "being executed by a platform sufficiently resembles" is well known to those of ordinary skill in the art of computing testing and commonly employed by them to convey the close similarity between a computer program or a computational task being carried out by a system and another computer program or computational task. A quick search of Google shows over 251,000 hits for the phrase "workload resembles". The top hits include an article by Philip Joung of Spirent Communications Inc. on "General

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Network Performance Testing Methodology" (using a workload that resembles a production network's traffic), and an article by Baiyi Song, et al. of University of Dortmund, Germany on "Modeling of Parameters in Supercomputer Workloads" (determining whether a workload resembles a certain other workload and training the model accordingly). Thus, the phrase clearly conveys concrete operations and not just abstract ideas.

Accordingly, Applicant submits that claims 11-27 and 29-31 reciting the above phrases are indeed patentable under §101. Thus, Applicant requests that the Examiner withdraw the §101 rejection of claims 11-27 and 29-31 and allow the claims.

Examiner's response:

Implying the customization, adjustment, alteration and so forth of a module still does not state a practical reason why these modifications are needed regarding a real world viewpoint. The number of hits on a search engine also does not imply a practical application or real world function. 'Concrete operations' is not equivalent to 'practical application' requirement of 35 U.S.C. § 101. Operations within a computer without any real world function or purpose do not satisfy 35 U.S.C. § 101.

7. In reference to the Applicant's argument:

Claims 17-20, and 24-26

Claim 17, as amended, recites "In a system, a method of operation comprising: generating a lookup index to a table of configuration parameters values, based at least in part on one or more performance events observed in associated with a platform's execution of a workload; and

selecting one of one or more pre-established sets of configuration parameter values, based at least in part on the generated lookup index, for application to configure the platform."

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In contrast, Reinemann does not teach "generating a lookup index to a table of configuration parameter values, based at least in part on one or more performance events observed in associated with a platform's execution of a workload". Reinemann teaches that resource utilization of a processor is monitored by collecting performance status and archiving them in a log file (Reinemann, paragraph [0011]). Reinemann simply teaches that the performance status may be stored in the log file as they are collected at a pre-determined time interval (Reinemann, paragraph [0011D, which may be simply accomplished by writing to the log file with a timestamp. However, writing into a file even with a timestamp is not the same as generating a lookup index to a table of configuration parameter values. Reinemann does not disclose, expressly or inherently, the generating of a lookup index to a table of configuration parameter values, through archiving performance status. Accordingly, the archiving operation of Reinemann in no way generates a lookup index to a table of configuration parameter values and, thus, fails to anticipate claim 17 in as complete of detail as is claimed.

Claims 18-20 depend from amended claim 17, incorporating its limitations. Accordingly, for at least the same reasons, Reinemann fails to anticipate claims 18-20.

Amended claim 24 recites limitations similar to those of amended claim 17. Accordingly, for at least the same reasons, Reinemann fails to anticipate claim 24.

Claims 25-26 depend from amended claim 24, incorporating its limitations. Accordingly, for at least the same reasons, Reinemann fails to anticipate claims 25-26.

Examiner's response:

Specification is silent concerning 'table of configuration parameter' therefore this limitation is not considered.

8. In reference to the Applicant's argument:

Claim Resections under 35 U.S.C. & 103

In "Claim Rejections – 35 USC § 103," item 4 on page 17 of the above-identified Office Action, claims 2 and 10 have been rejected as being unpatentable over Reinemann, in view of Sato, U.S. Patent Publication No. 2002/0174389 and further in view of Chapple, U.S. Patent Publication No. 2002/0172320 under 35 U.S.C. § 103(a).

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The rejections of claims 2 and 10 are obviated by their cancellations.

In "Claim Rejections – 35 USC § 103," item 5 on page 19 of the above-identified Office Action, claims 6, 11, and 12 have been rejected as being unpatentable over Reinemann, and further in view of Chiu, U.S. Patent Publication No. 2002/0186658 under 35 U.S.C. § 103(a).

L Claim 6

The rejection of claim 6 is obviated by its cancellation.

ii. Claims 11-12

Claim 11 recites "In a system, a method of operation comprising:

determining whether a workload executed or being executed by a platform resembles a reference workload, based at least in part on one or more performance events observed from monitoring the platform's execution of the workload; and

if the workload is determined to resemble the reference workload, performing a selected one of

selecting a set of one or more configuration parameter values pre-selected for the platform to execute the resembled reference workload, and
providing information about the determined resembled reference workload to facilitate the selection of the set of one or more configuration parameter values pre-selected for the platform to execute the determined resembled reference workload."

The present invention, as claimed in claim 11, teaches a method of determining whether a workload executed or being executed by a platform resembles a reference workload, and selecting a set of configuration parameter values pre-selected for a platform to execute the resembled reference workload. The selected set of configuration parameter values are used to reconfigure the platform for optimal performance.

In contrast, Reinemann does not teach or suggest at least the recitations of claim 11. Reinemann simply stands for resource sharing among a network of processors, where a policy manager of a processor may decide to share one or more of its resources based on a resource utilization threshold set by a policy (Reinemann, paragraph [0012]). The only comparison necessary to achieve Reinemann's purpose - optimized resource utilization among the processors of the network - is between the performance of a system resource (such as memory utilization) and thresholds dictating whether the resource ought to be sharable. Determining whether any given set of instructions (workload) executing on one of the processors resembles a "reference set", as is

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claimed in claim 11, has nothing to do with Reinemann's purpose. Consequently, one skilled in the art would not think to compare instructions executing on the processor to a reference set of instructions, as doing so would not help in determining whether a resource is being fully utilized.

Chiu likewise does not teach or suggest the recitations of claim 11. Instead, Chiu teaches selectively off-loading an appropriate amount of traffic from congested sub-regions of a network to more lightly loaded sub-regions of the network, thus permitting effective utilization of network resources (Chiu, paragraph [0006]). Chiu also does not address the determining of whether a reference workload resembles the executing workload. Chiu is merely concerned with optimizing the balance of traffic among sub-regions of a network. Determining whether any given set of instructions (workload) executing in one of the sub-regions resembles a "reference set", as is claimed in claim 11, has nothing to do with Chiu's purpose.

Consequently, one skilled in the art would not think to compare instructions executing in one of the sub-regions to a reference set of instructions, as doing so would not help in determining whether traffic is balanced between the sub-regions.

Therefore, Reinemann and Chiu, individually or combined, failed to teach or suggest the limitation of claim 11. Accordingly, claim 11 is patentable over Reinemann and Chiu, alone or in combination.

Claim 12 depends from claim 11, incorporating its limitations. Accordingly, for at least the same reasons, claim 12 is patentable over Reinemann and Chiu, alone or in combination.

Examiner's response:

Applicant makes no specific argument. All claim limitations are presented and addressed in the office stated above. 'Reference workload' of applicant is equivalent to 'OSPF' of Chiu. 'Workload' of applicant is equivalent to 'processors' (processors ≠ CPU) of Reinemann.

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9. In reference to the Applicant's argument:

References Disclosed by IDS Section

Two references are disclosed in the attached IDS form, i.e., Caccavale, U.S. Patent No. 5,835,756 (hereinafter, Caccavale) and Blake, U.S. Patent No. 6,067,412 (hereinafter, Blake). Applicant respectfully submits that the pending claims are patentable over Caccavale and Blake for at least the reasons given below.

1. Claim 11 and Related Claims

Caccavale does not teach or suggest the above stated limitations of claim 11 of the present invention. Caccavale simply teaches dynamically tuning parameters of a server based on the workload that the server is currently executing (Caccavale, column 2, lines 60-63; column 3, lines 3-8). Caccavale accomplishes this tuning by inputting the current workload into "microlevel" algorithms targeted for specific parameters (e.g., if the workload is X, then data cache should be Y, wherein $Y = F(X)$). Thus, while both claim 11 of the present invention and Caccavale teach the selection of configuration parameter values in response to performance events associated with the currently executing workload, Caccavale accomplishes the selection and application of the parameter values by evaluating the workload in view of one or more algorithms instead of by comparing the currently executing workload to a reference workload.

Blake likewise does not teach or suggest the recitations of claim 11. Blake simply teaches determining a workload during execution of a specified computer program, predicting the program's performance using the determined workload, identifying a bottleneck system resource, selecting and modifying a system resource to reduce utilization of the bottleneck system resource, thus improving the program's performance (Blake, column 2, lines 26-67). However, Blake is not concerned with and does not address at least the determining of whether an executing workload resembles a reference workload.

Claim 21, amended claim 27, and claim 31 recite limitations similar to those of claim 11. Accordingly, for at least the same reasons, claims 21, 27, and 31 are patentable over Caccavale and Blake, alone or in combination. Claims 12-16 and 34-35, claims 22-23, amended claim 29, and amended claim 30 depend from claims 11, 21, and 27, respectively, incorporating their limitations. Accordingly, for at least the same reasons, claims 12-16, 22-23, 29-30, and 34-35 are patentable over Caccavale and Blake, alone or in combination.

2. Claim 17 and Related Claims

Caccavale does not teach or suggest the above recited limitations of amended claim 17 of the present invention. Caccavale teaches mapping the current values of the monitored workload, resource utilization, and server performance onto a three-dimensional surface for determining the current server status and predicting future performance information of the server (Caccavale, column 3, lines 55-67; column 4,

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lines 1-3). Caccavale is not concerned with and does not address at least the generating of a lookup index to a table of configuration parameter values based on the server performance observed. The mapping function of Caccavale is simply for displaying and predicting performance, not for facilitating the selection of server parameters to tune the server.

Similarly, Blake does not teach or suggest the above recited limitations of amended claim 17 of the present invention. Blake teaches determining a workload during execution of a specified computer program based on the performance measurements received (Blake, column 2, lines 26-33). Blake is not concerned with and does not address the generating of a lookup index to a table of configuration parameter values based on the performance measurements received, and is simply directed to determining the workload.

Amended claim 24 recites limitations similar to those of amended claim 17. Accordingly, for at least the same reasons, claim 24 is patentable over Caccavale and Blake, alone or in combination. Claims 18-20, 36-37, and 25-26 depend from amended claims 17 and 24, incorporating their limitations respectively. Accordingly, for at least the same reasons, claims 18-20, 36-37, and 25-26 are patentable over Caccavale and Blake, alone or in combination.

Examiner's response:

Examiner does not use either Caccavale or Blake in this final rejection.

Examination Considerations

10. The claims and only the claims form the metes and bounds of the invention.

"Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The

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Examiner has the full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

11. Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and sprit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but link to prior art that one of ordinary skill in the art would find inherently appropriate.

12. Examiner's Opinion: Paragraphs 11 and 10 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Claims 11-27, 29-31, 34-37 are rejected.

Correspondence Information

15. Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner Peter Coughlan, whose telephone number is (571) 272-5990. The Examiner can be reached on Monday through Friday from 7:15 a.m. to 3:45 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor David Vincent can be reached at (571) 272-3687. Any response to this office action should be mailed to:

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Peter Coughlan

10/3/2006



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